

**RHINOECIUS CAVANNUS, A NEW SPECIES OF NASAL MITE
FROM A THAILAND OWL
(MESOSTIGMATA: RHINONYSSIDAE)¹**

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The rhinonyssid genus *Rhinoecius* Cooreman as presently known is restricted to the avian order Strigiformes. Only seven species of mites have been described from an order that contains approximately 29 genera and 142 species of owls. No doubt many species of *Rhinoecius* remain to be discovered.

The description of an additional species and record of another species from Thailand follows. The material was received from Dr. D. J. Gould of the SEATO Medical Research Laboratory and from Dr. H. E. McClure of the Migratory Animal Pathological Survey, both of Bangkok, Thailand.

The new species is deposited in the Bishop Museum with remaining material divided between the Bishop Museum and the SEATO Laboratory. Host nomenclature follows Deignan (1963).

***Rhinoecius bisetosus* Strandtmann**

Rhinoecius bisetosus Strandtmann, 1952, Proc. Ent. Soc. Wash. 54(4):212.

Thailand: 2 ♀♀, from *Glaucidium cuculoides* (Vigors) (SMRL 1748), Huai Mae Sanam, Hod, Chiangmai (N 18°10', E 98°20'), 915–1070 m, 6 November 1962.

Our material showed the same variation as was listed by Strandtmann (1960) for specimens from Thailand.

***Rhinoecius cavannus*, n. sp.**

(Fig.1)

Diagnosis. A medium sized mite with podosomal plate slightly longer than wide, widest in posterior half, with 2 pairs of setae and 1 pair of setal bases; opisthosomal and pygidial plates divided vertically; sternal plate small and very poorly developed; 3 anal setae; gnathosomal setae absent.

Description

Female. Body: Length of idiosoma 635 μ , width 470 μ ; all dorsal and ventral setae simple. **Dorsum:** Podosomal plate 253 μ long, 239 μ wide, widest in posterior half, margins irregular, with 2 pairs of setae and 1 pair of setal bases—1 pair of setae lateral, opposite widest part of plate, 1 pair on posterior margin, 1 pair of setal bases on anterolateral margin, 1 median and about 8 lateral areas of muscle attachment poorly distinguished, 2 pairs of platelets anterolateral to podosomal plate—1 pair very close to podosomal plate with pair of pores, 1 pair poorly developed and midway between podosomal plate and lateral margin of idiosoma, opisthosomal plate reduced to anterior portion and divided vertically,

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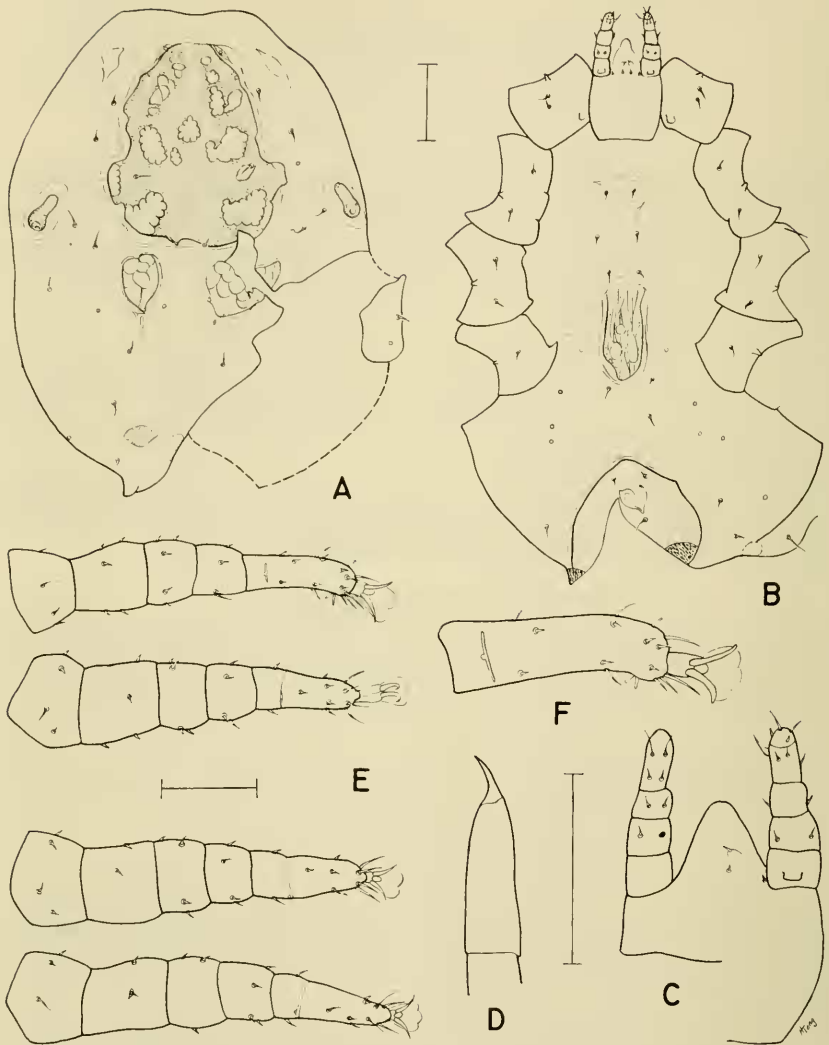


Fig. 1. *Rhinococcus cavannus* n. sp., holotype female: A, dorsal view; B, ventral view; C, gnathosoma, dorsal (left) and ventral (right) views; D, chelicera; E, legs I to IV, ventral view; F, enlarged ventral view of tarsus I. Scale equals 100 μ .

76 μ long, 55 μ wide, with irregular margins, several minute platelets extend from posterior margin, weakly indicated area of muscle attachment covers most of each plate; pygidial plate divided vertically, 28 μ long, 44 μ wide, opisthosomal and pygidial plates without setae and pores; integument with 8 pairs of setae—2 pairs lateral to podosomal plate, 2 pairs between peritremes and

Table 1. Leg chaetotaxy of *Rhinoecius cavannus* n. sp.

Segment	Leg			
	I	II	III	IV
Coxa	$0 \frac{0}{2} 0$	$0 \frac{0}{2} 0$	$0 \frac{0}{2} 0$	$0 \frac{0}{1} 0$
Trochanter	$1 \frac{0}{2} 1$	$1 \frac{0}{3} 0$	$1 \frac{0}{3} 0$	$1 \frac{0}{2} 0$
Femur	$2 \frac{4}{1} 2$	$1 \frac{4}{1} 2$	$1 \frac{3}{1} 0$	$1 \frac{3}{1} 0$
Genu	$2 \frac{4}{2} 1(2)$	$1 \frac{4}{2} 1$	$1 \frac{4}{2} 1$	$1 \frac{4}{1} 1$
Tibia	$1 \frac{3}{2} 1$	$1 \frac{3}{2} 1$	$1 \frac{3}{2} 1$	$1 \frac{3}{2} 1$
Tarsus	22	$3 \frac{5}{5} 3$	$3 \frac{5}{5} 3$	$3 \frac{5}{5} 3$

opisthosomal and podosomal plates, 1 pair posterior to peritremes and lateral to opisthosomal plates, 2 pairs between opisthosomal and pygidial plates, 1 pair posterolateral to pygidial plates, 4 pairs of pores—1 pair opposite widest portion of podosomal plate, 1 pair between divided opisthosomal plates (1 attached to plate), 1 pair opposite outer margins of opisthosomal plates, 1 pair on posterolateral margin of idiosoma; peritreme including stigma 46μ long, above coxa III, stigma 18μ wide, enclosed in shieldlet. *Venter*: Tritosternum absent; sternal plate very poorly developed, represented by several non-striated areas anterior to first pair and between first and second pairs of sternal setae, 3 pairs of sternal setae, distance between first and second pair slightly greater than distance between second and third pair, second pair farther apart than first and third pair, no sternal pores; genital plate 145μ long, 51μ wide, anterior margin reaching almost to level of third pair of sternal setae, sides subparallel, posterior margin broadly rounded, with about 3 poorly defined areas of muscle attachment, 1 pair of setae and pores posterolateral and lateral to genital plate, respectively; anal plate 154μ long, approximately 122μ wide, posterior and posterolateral margins thickened, cribrum present, anal pore in anterior half of plate, paranal setae anterior to anal pore, postanal seta immediately posterior to anal pore, all anal setae about 23μ long; opisthosoma with 3 setae—1 about midway between genital and anal plates, 1 pair opposite lateral margins of anal plate, 3 pairs of pores posterior to coxae IV. *Gnathosoma*: No deutosternal groove or gnathosomal setae; 3 pairs of short pointed hypostomal setae; palpal trochanter without setae, femur with 1 seta (2 setae on one side) and 1 sensory area dorsally and 2 setae ventrally, genu with 2 setae dorsally and ventrally, tibia with 4 setae dorsally, 2 longer than any on palps, 4 setae ventrally, 1 on inner margin, long and stout, tarsus with 4 setae, 2 short and 2 long; chelicera 133μ long, 28μ wide, chela 25μ long, shape typical for genus. *Legs*: Length of tarsus I 115μ , II 110μ , III 122μ , and IV 127μ , most setae

short and simple, a few on tarsus and dorsum long, chaetotaxy indicated in Table 1, tarsal claws II to IV better developed than I.

Holotype female (BISHOP 7616), from *Otus bakkamoena* Pennant (MAPS H 0907), Thailand, Chiengmai, Doi Inthanon, 2 November 1964, J. T. Marshall (JTM 5904).

The new species is similar to *Rhinoecius grandis* Strandtmann, 1952, described from the United States and since reported from Brazil (Amaral, 1962). *R. cavannus* n. sp. has a different shaped podosomal plate with two pairs of setae and one pair of setal bases, and a pygidial plate. In addition, the platelets, setae, and pores on the idiosoma differ in number and position. Ventrally, the pair of gnathosomal setae is absent, the palpal trochanter lacks setae, and the sternal plate is much smaller and more poorly developed. In *R. grandis* there is one pair of setae on the podosomal plate and the pygidial plate is missing. Also the gnathosomal setae are present and the palpal trochanter has one ventral seta.

Rhinoecius are thick mites and it is difficult to get mounted specimens in which you can see the important taxonomic characters and still not have the mite damaged. This is the case with the unique holotype which has the anal plate and the right posterolateral aspect of the dorsum damaged. In addition, five tarsi are broken, but not entirely separated from the tibiae. This damage does not obscure any characters important for distinguishing the species.

HOST AND LOCALITY LIST OF *Rhinoecius* FROM STRIGIFORMES

Species	Host	Locality
1. <i>africanus</i> Zumpt and Patterson	<i>Asio capensis</i> (A. Smith)	South Africa
2. <i>bisetosus</i> Strandtmann	<i>Glaucidium cuculoides</i> (Vigors)	Thailand
	<i>Glaucidium cuculoides bruegeli</i> (Parrot)	Thailand
	<i>Speotyto cunicularia</i> (Molina)	United States
	<i>Speotyto cunicularia grallaria</i> (Temminck)	Brazil
3. <i>cavannus</i> n. sp.	<i>Otus bakkamoena</i> Pennant	Thailand
4. <i>cooremani</i> Strandtmann	<i>Strix varia</i> Barton	United States
5. <i>grandis</i> Strandtmann	<i>Bubo virginianus</i> (Gmelin)	United States
	<i>Pulsatrix melanota koenigswaldiana</i> (Bertoni and Bertoni)	Brazil
6. <i>oti</i> Cooreman	<i>Asio otus otus</i> (Linnaeus)	Belgium
7. <i>subbisetosus</i> Bregetova	<i>Athene noctua</i> (Scopoli)	Russia

8. *tytonis* Fain*Tyto alba* (Scopoli)*Tyto alba affinis* (Blyth)

South Africa

Rwanda

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PARATOXURINAE, A NEW SUBFAMILY NAME IN THE PYRGOTIDAE
(DIPTERA)

In the revision of Neotropical Pyrgotidae by Aczél (1956), the genus *Descoleia* Aczél was placed in the Toxurinae, a subfamily founded by Malloch (1929) as tribe Toxurini (sic) and derived from the generic name *Toxura* Macquart. Paramonov (1958: 110-111) has shown that Malloch misidentified *Toxura maculipennis* Macquart and has renamed the species Malloch had before him, placing it in the new genus *Paratoxura* Paramonov. According to Paramonov, the true *Toxura* is a genus of Tephritidae.

Consequently, the group taxon based upon the misidentified *Toxura* will also need a new name. Paramonov did not use a subfamily classification in his work, beyond citing "Lochmostylinae" with reference to an extra-Australian genus. In my catalogue of neotropical Pyrgotidae (Steyskal, 1967: 2), I placed *Descoleia* in the subfamily Paratoxurinae. Inasmuch as the Code requires a diagnosis of new taxa, that is furnished here: PARATOXURINAE, new subfamily based upon the genus *Paratoxura* Paramonov, 1958: 110—Pyrgotidae with setiform, microscopically pubescent arista; well developed mouthparts; apex of wing vein Sc turned sharply costad; 2nd antennal segment with deep laterodorsal cleft; as treated by Aczél (1956) under the name Toxurinae and by Malloch (1929) under the name Toxurini. Literature cited: Aczél, M. 1956. Revisión parcial de las Pyrgotidae, etc. Rev. Brasil. Ent. 4:161-184, 5:1-70, 6:1-38; Malloch, J. R. 1929. In Bezzi, M., Australian Pyrgotidae (Diptera). Proc. Linn. Soc. New So. Wales 54:1-31; Paramonov, S. J. 1958. A review of Australian Pyrgotidae (Diptera). Austral. Jour. Zool. 6:89-138; Steyskal, G. C. 1967. Family Pyrgotidae. In Dept. Zool. Secr. Agric., São Paulo, A catalogue of the Diptera of the Americas south of the United States, fam. 56:1-8.—GEORGE C. STEYSKAL, *Systematic Entomology Laboratory, U. S. Department of Agriculture, c/o U. S. National Museum, Washington, D. C. 20560.*